

PATENTS  
Attorney Docket No. CBM-001.02

IN THE CLAIMS:

1. (Currently amended) A method for scheduling data flows among processors, comprising,  
receiving a request for processing,  
identifying a processor group hosting at least one application required to process the request, the processor group including at least one processor[[;]],  
consulting a flow schedule associated with the identified processor group, and,  
transferring the request to at least one processor in the identified processor group based on the associated flow schedule.
2. (Original) A method according to claim 1, wherein receiving a request for processing includes receiving a data flow from a network.
3. (Original) A method according to claim 1, wherein consulting a flow schedule further comprises consulting a flow schedule vector.
4. (Original) A method according to claim 1, wherein transferring the request includes transferring the request based on sequentially moving among processors in the consulted flow schedule.

FHBOSTON/1118123.4

PATENTS  
Attorney Docket No. CBM-001.02

5. (Original) A method according to claim 4, wherein sequentially moving among processors includes returning to the beginning of the consulted flow schedule upon reaching the end of the consulted flow schedule.
6. (Original) A method according to claim 1, further comprising computing a flow schedule based on intrinsic data from the identified processor group.
7. (Original) A method according to claim 6, wherein computing a flow schedule based on intrinsic data includes computing a flow schedule based on at least one of CPU utilization, memory utilization, packet loss, and queue length or buffer occupation of the processors in the identified processor group.
8. (Original) A method according to claim 6, wherein computing a flow schedule further comprises receiving the intrinsic data from processors in the identified processor group.
9. (Original) A method according to claim 8, wherein receiving data from processors further includes receiving data at specified intervals.
10. (Original) A method according to claim 6, wherein computing a flow schedule further comprises filtering the intrinsic data.

PATENTS  
Attorney Docket No. CBM-001.02

11. (Original) A method according to claim 1, further comprising providing processor groups, the processor groups having at least one processor and wherein the processors in a processor group include at least one similar application.
12. (Original) A method according to claim 1, further comprising providing processor groups, the processor groups having at least one processor and wherein the processors in a processor group are identically configured.
13. (Original) A method according to claim 12, further comprising computing a flow schedule for the processor groups.
14. (Original) A method according to claim 1, further comprising providing processor groups wherein the processors in the different processor groups include at least one different application.
15. (Original) A method according to claim 1, wherein consulting a flow schedule further includes providing an initial flow schedule.
16. (Original) A method according to claim 1, wherein identifying a processor group includes identifying an application associated with the request.

FHBOSTON/1118123.4

PATENTS  
Attorney Docket No. CBM-001.02

17. (Original) A method according to claim 1, wherein identifying a processor group includes consulting a hash table.

18. (Currently amended) An apparatus to process a data flow on a network, comprising,  
at least one flow processor module having at least one flow processor, each such  
flow processor being associated with at least one corresponding processor group,  
at least one network processor module having at least one processor, at least one  
interface to receive the data flow from the network, and instructions to cause the at least one  
processor of the at least one network processor to (1) identify one said corresponding  
processor group that hosts at least one application required to process the data flow and (2)  
forward the data flow to at least one flow processor module of the identified processor group  
capable of processing the data flow, and  
at least one control processor module in communication with the at least one flow  
processor module, and having at least one processor and instructions for causing the at least  
one processor to receive intrinsic data from the at least one flow processor module.

19. (Currently amended) An apparatus according to claim 18, wherein the at least one flow  
processor module includes at least one memory to store the at least one application.

20. (Original) An apparatus according to claim 18, wherein the at least one control  
processor module is in communication with the at least one network processor module.

PATENTS  
Attorney Docket No. CBM-001.02

21. (Original) An apparatus according to claim 18, wherein the at least one control processor module includes instructions for causing the at least one processor to compute a flow schedule for the at least one applications processor group.
22. (Original) An apparatus according to claim 18, wherein the intrinsic data includes at least one of CPU utilization, memory utilization, packet loss, and queue length or buffer occupation.
23. (Original) An apparatus according to claim 18, wherein the control processor modules further include at least one filtering module.
24. (Original) An apparatus according to claim 18, wherein the network processor modules further include at least one flow schedule for directing flows to the flow processor modules.
25. (Original) An apparatus according to claim 18, wherein the network processor modules further include at least one initial flow schedule.
26. (Currently amended) An apparatus according to claim 18, wherein the network processor modules further include a hash table to associate the data request flow with a flow schedule.

FH BOSTON/1118123.4

PATENTS  
Attorney Docket No. CBM-001.02

27. (Original) An apparatus according to claim 24, wherein the flow schedule further includes a list of flow processor modules.

28. (Currently amended) An apparatus for scheduling data flows on a network, comprising

a front-end processor to receive data flows from the network,  
at least one applications processor group to process the flows,  
at least one flow schedule associated with the at least one applications processor group, and,

instructions to cause the front-end processor to identify, for each of the received data flows, at least one applications processor group hosting at least one application required to process the flow, select at least one processor within the identified processor group based on the at least one flow schedule associated with the identified applications processor group, and transfer the flow to the selected processor.

29. (Original) An apparatus according to claim 28, wherein the at least one flow schedule includes at least one flow vector.

30. (Original) An apparatus according to claim 28, further comprising at least one control processor to receive data from the at least one applications processor group.

PATENTS  
Attorney Docket No. CBM-001.02

31. (Original) An apparatus according to claim 30, wherein the control processor includes at least one filter.
32. (Original) An apparatus according to claim 28, wherein the at least one applications processor group includes at least one processor.
33. (Original) An apparatus according to claim 32, wherein the at least one processor includes at least one memory to store applications.
34. (Original) An apparatus according to claim 28, wherein the front-end processor includes a hash table for associating a data flow with at least one applications processor group.
35. (Cancelled)
36. (Currently Amended) A method according to claim 35 38, wherein computing a flow schedule based on historic performance data includes providing historic data for at least one of CPU utilization, memory utilization, packet loss, and queue length or buffer occupation of the processors in the identified processor group.
37. (Currently Amended) A method according to claim 35 38, wherein computing a flow schedule based on historic performance data includes providing presently existing data

PATENTS  
Attorney Docket No. CBM-001.02

for at least one of CPU utilization, memory utilization, packet loss, and queue length or buffer occupation of the processors in the identified processor group.

38. (New) For scheduling data flows among at least two processors arranged in at least one processor group, a method comprising:

computing, from historic performance data taken from the processors, at least one flow schedule associated with at least one said processor group,

receiving a request for processing,

identifying one said processor group hosting at least one application required to process the request,

consulting one of the at least one flow schedule associated with the identified processor group, and

transferring the request to at least one processor chosen from among the processors in the identified processor group in accordance with the associated flow schedule.

FHBOSTON/1118123.4